```
MMM      MMM   MMM       MMM   GGGGGGGGGGGG   TTTTTTTTTTTTTTT      SSSSSSSSSSSS   TTTTTTTTTTTTTTT
MMM      MMM   MMM       MMM   GGGGGGGGGGGG   TTTTTTTTTTTTTTT      SSSSSSSSSSSS   TTTTTTTTTTTTTTT
MMMMM  MMMMM   MMMMM   MMMMM   GGGGGGGGGGGG   TTTTTTTTTTTTTTT      SSSSSSSSSSSS   TTTTTTTTTTTTTTT
MMMMMM MMMMMM  MMMMMM MMMMMM   GGG                   TTT          SSS                   TTT
MMMMMM MMMMMM  MMMMMM MMMMMM   GGG                   TTT          SSS                   TTT
MMM MMM MMM    MMM MMM MMM     GGG                   TTT          SSS                   TTT
MMM MMM MMM    MMM MMM MMM     GGG                   TTT          SSS                   TTT
MMM  MMM  MMM  MMM  MMM  MMM   GGG                   TTT          SSS                   TTT
MMM       MMM  MMM       MMM   GGG                   TTT             SSSSSSSSS           TTT
MMM       MMM  MMM       MMM   GGG                   TTT             SSSSSSSSS           TTT
MMM       MMM  MMM       MMM   GGG                   TTT             SSSSSSSSS           TTT
MMM       MMM  MMM       MMM   GGG  GGGGGGGGG        TTT                     SSS         TTT
MMM       MMM  MMM       MMM   GGG  GGGGGGGGG        TTT                     SSS         TTT
MMM       MMM  MMM       MMM   GGG        GGG        TTT                     SSS         TTT
MMM       MMM  MMM       MMM   GGG        GGG        TTT                     SSS         TTT
MMM       MMM  MMM       MMM   GGG        GGG        TTT                     SSS         TTT
MMM       MMM  MMM       MMM   GGGGGGGGG             TTT          SSSSSSSSSSSS           TTT
MMM       MMM  MMM       MMM   GGGGGGGGG             TTT          SSSSSSSSSSSS           TTT
```

MMGCRTDEL LIS

MMGCRTDEL
V04-000

E 4
- TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page 1
                                        5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (1)

```
0000    1  ;
0000    2  ;                    MEMORY MANAGEMENT SERVICES TEST #3
0000    3  ;
0000    4  ;
0000    5          .TITLE   MMGCRTDEL - TEST OF $CRETVA/$DELTVA SYSTEM SERVICES
0000    6          .IDENT   'V04-000'
0000    7  ;
0000    8  ;*********************************************************************
0000    9  ;*                                                                   *
0000   10  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                          *
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0000   22  ;*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT *
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0000   24  ;*                                                                   *
0000   25  ;*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS *
0000   26  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.          *
0000   27  ;*                                                                   *
0000   28  ;*                                                                   *
0000   29  ;*********************************************************************
0000   30  ;
0000   31  ;++
0000   32  ; FACILITY: USER MODE MEMORY MANAGEMENT SERVICES TEST
0000   33  ;
0000   34  ; ABSTRACT: THIS SET OF ROUTINES TESTS THE MEMORY MANAGEMENT SERVICES
0000   35  ;
0000   36  ; ENVIRONMENT: USER MODE DIAGNOSTIC
0000   37  ;
0000   38  ; AUTHOR: PETER H. LIPMAN          , CREATION DATE: 6-JAN-77
0000   39  ;
0000   40  ; MODIFIED BY:
0000   41  ;
0000   42  ;     V02-012 SHZ0003        Stephen Zalewski        20-Aug-1980
0000   43  ;             Added further tests to system services tested in this
0000   44  ;             program.  Also incorporated program into MMG test
0000   45  ;             package.
0000   46  ;
```

MMGCRTDEL   F 4
V04-000   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44 VAX/VMS Macro V04-00   Page 2
        DECLARATIONS   5-SEP-1984 01:58:02 [MMGTST.SRC]MMGCRTDEL.MAR;1   (2)

```
0000    48                .SBTTL  DECLARATIONS
0000    49  ;
0000    50  ; INCLUDE FILES:
0000    51  ;
0000    52                .SBTTL  MACROS
0000    53
0000    54  ; MACROS:
0000    55  ;
0000    56                .MACRO  LIST
0000    57                .LIST   MEB
0000    58                .ENDM   LIST
0000    59
0000    60                .MACRO  NLIST
0000    61                .NLIST  MEB
0000    62                .ENDM   NLIST
0000    63
0000    64                .MACRO  CRETVA STARTVA,ENDVA,STATUS=S^#SS$_NORMAL,-
0000    65                        INADR=W^INRANGE,RETADR=W^RETRANGE
0000    66        LIST
0000    67                .IF     NB,STARTVA
0000    68                MOVL    STARTVA,W^INRANGE
0000    69                .ENDC
0000    70                .IF     NB,ENDVA
0000    71                MOVL    ENDVA,W^INRANGE+4
0000    72                .ENDC
0000    73                MOVZWL  STATUS,R3
0000    74                MOVAL   INADR,R0
0000    75                MOVAL   RETADR,R1
0000    76                BSBW    CRETVASUBR
0000    77        NLIST
0000    78                .ENDM   CRETVA
0000    79
0000    80                .MACRO  DELTVA STARTVA,ENDVA,STATUS=S^#SS$_NORMAL,-
0000    81                        INADR=W^INRANGE,RETADR=W^RETRANGE
0000    82        LIST
0000    83                .IF     NB,STARTVA
0000    84                MOVL    STARTVA,W^INRANGE
0000    85                .ENDC
0000    86                .IF     NB,ENDVA
0000    87                MOVL    ENDVA,W^INRANGE+4
0000    88                .ENDC
0000    89                MOVZWL  STATUS,R3
0000    90                MOVAL   INADR,R0
0000    91                MOVAL   RETADR,R1
0000    92                BSBW    DELTVASUBR
0000    93        NLIST
0000    94                .ENDM   DELTVA
0000    95
0000    96                .MACRO  EXPREG PAGCNT,REGION=#0,STATUS=S^#SS$_NORMAL,-
0000    97                RETADR=W^RETRANGE
0000    98        LIST
0000    99                MOVZWL  STATUS,R3
0000   100                MOVL    PAGCNT,R4
0000   101                MOVAL   RETADR,R1
0000   102                .IF     IDN,<REGION>,<#0>
0000   103                CLRL    R5
0000   104                .IFF
```

```
              0000   105                    MOVL    REGION,R5
              0000   106                    .ENDC
              0000   107                    BSBW    EXPREGSUBR
              0000   108            NLIST
              0000   109            .ENDM   EXPREG
              0000   110
              0000   111            .MACRO  RANGECHK ONOROFF
              0000   112            LIST
              0000   113            .IF     IDN <ONOROFF>,<OFF>
              0000   114            BICL    #CTL$M_RNGCHK,W^CTLFLG
              0000   115            .IFF
              0000   116            BISL    #CTL$M_RNGCHK,W^CTLFLG
              0000   117            .ENDC
              0000   118            NLIST
              0000   119            .ENDM   RANGECHK
              0000   120
              0000   121    ;
              0000   122    ; EQUATED SYMBOLS:
              0000   123    ;
              0000   124            $SSDEF
              0000   125            $SECDEF
              0000   126            $PRTDEF
              0000   127            $GBLINI
              0000   128            $VIELD  CTL,0,<-                    ;DEFINE CONTROL BITS IN R3
              0000   129                    <MEMLOOP,,MASK>,-           ;LOOP IN MEMORY WRITE LOOP
              0000   130                    <TSTLOOP,,MASK>,-           ;REDO ENTIRE TEST FROM TOP
              0000   131                    <PIDMSG,,MASK>,-            ;PUT PROCESS ID IN EACH TYPEOUT
              0000   132                    <RNGCHK,,MASK>-             ;ON IF CHECKING RETURN RANGE
              0000   133                    >
 00000010     0000   134            PRT$C_NONE=1â4
              0000   135    ;
              0000   136    ; OWN STORAGE:
              0000   137    ;
```

```
                     0000      139              .SBTTL  DATA STORAGE AND MESSAGE STRINGS
            00000000  0000      140              .PSECT  DATAO,PAGE,WRT,NOEXE
                     0000      141  INRANGE:
            00000008  0000      142              .BLKL   2
                     0008      143  RETRANGE:
            00000008  0008      144              .BLKL   2
            00000006  0010      145  CTLFLG: .LONG   CTL$M_TSTLOOP!CTL$M_PIDMSG
            00000018  0014      146  SAVEND: .BLKL   1
                     0018      147  HIGHPOADR:
            0000001C  0018      148              .BLKL   1                               ;LAST BYTE ADDRESS IN PO SPACE
            00000020  001C      149  PID:    .BLKL   1                               ;PROCESS ID
                     0020      150  MAXPASSCNT:
            00000003  0020      151              .LONG   3                               ;NUMBER OF PASSES TO RUN
                     0024      152  PASSCNT:
            00000028  0024      153              .BLKL   1                               ;PASS COUNTER
                     0028      154  PREVPROT:
            00000028  0028      155  FAB:    $FAB    FAC=PUT, FNA=OUTNAMADR, FNS=OUTNAMSIZ ;FAB FOR OUTPUT
            00000078  0078      156  RAB:    $RAB    FAB=FAB                          ;RECORD ACCESS BLOCK FOR OUTPUT
            000000C0  00BC      157  MSGLEN: .BLKL   1                               ;RETURN LENGTH FROM FAO
  000000DE'000000A0'  00C0      158  MSGBUFD:.LONG   MSGBUFSIZ,MSGBUF                 ;MESSAGE BUFFER DESCRIPTOR
                     00C8      159  PIDMSGD:
  000000DA'00000004'  00C8      160              .LONG   MSGBUF-PIDMSG,PIDMSG
                     00D0      161  ;
                     00D0      162  ; ***** DO NOT SEPARATE OR REORDER THE FOLLOWING LINES
                     00D0      163  ;
                     00D0      164  MSGBUFID:
            0A 0D    00D0      165  CRLF:   .BYTE   ^015,^012
  20 53 53 45 43 4F 52 50  00D2      166              .ASCII  $PROCESS $
         20 20 20 20  00DA      167  PIDMSG: .ASCII  $      $
            0000017E  00DE      168  MSGBUF: .BLKB   160                             ;MESSAGE BUFFER USED BY FAO
            000000A0  017E      169              MSGBUFSIZ=.-MSGBUF
                     017E      170  ;
                     017E      171  ; ***** DO NOT SEPARATE OR REORDER THE PRECEEDING LINES
                     017E      172  ;
```

I 4

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44 VAX/VMS Macro V04-00   Page   5
V04-000   DATA STORAGE AND MESSAGE STRINGS   5-SEP-1984 01:58:02 [MMGTST.SRC]MMGCRTDEL.MAR;1   (4)

```
                                        00000000    174          .PSECT  CODE,PAGE,NOWRT,EXE
                                        0000        175
                                        0000        176  OUTNAMADR:
              54 55 50 54 55 4F 24 53 59 53 0000    177          .ASCII  /SYS$OUTPUT/
                                  0000000A 000A     178          OUTNAMSIZ=.-OUTNAMADR
                                        000A        179
                                        000A        180  CRETVAERRADR:
52 52 45 20 41 56 54 45 52 43 2F 21 000A           181          .ASCII  $!/CRETVA ERROR - PC = !XL, STATUS WAS !XL, SHOULD BE !XL$
58 21 20 3D 20 43 50 20 2D 20 52 4F 0016
41 57 20 53 55 54 41 54 53 20 2C 4C 0022
4C 55 4F 48 53 20 2C 4C 58 21 20 53 002E
                  4C 58 21 20 45 42 20 44 003A
21 20 3D 20 52 44 41 4E 49 09 2F 21 0042           182          .ASCII  $!/       INADR = !XL - !XL,  RETADR = !XL - !XL!/$
52 20 20 2C 4C 58 21 20 2D 20 4C 58 004E
20 4C 58 21 20 3D 20 52 44 41 54 45 005A
                  2F 21 4C 58 21 20 2D 0066
                                  00000063 006D     183          CRETVAERRSIZ=.-CRETVAERRADR
                                        006D        184
                                        006D        185  DELTVAERRADR:
52 52 45 20 41 56 54 4C 45 44 2F 21 006D           186          .ASCII  $!/DELTVA ERROR - PC = !XL, STATUS WAS !XL, SHOULD BE !XL$
58 21 20 3D 20 43 50 20 2D 20 52 4F 0079
41 57 20 53 55 54 41 54 53 20 2C 4C 0085
4C 55 4F 48 53 20 2C 4C 58 21 20 53 0091
                  4C 58 21 20 45 42 20 44 009D
21 20 3D 20 52 44 41 4E 49 09 2F 21 00A5           187          .ASCII  $!/       INADR = !XL - !XL,  RETADR = !XL - !XL!/$
52 20 20 2C 4C 58 21 20 2D 20 4C 58 00B1
20 4C 58 21 20 3D 20 52 44 41 54 45 00BD
                  2F 21 4C 58 21 20 2D 00C9
                                  00000063 00D0     188          DELTVAERRSIZ=.-DELTVAERRADR
                                        00D0        189
                                        00D0        190  EXPREGERRADR:
52 52 45 20 47 45 52 50 58 45 2F 21 00D0           191          .ASCII  $!/EXPREG ERROR - PC = !XL, STATUS WAS !XL, SHOULD BE !XL$
58 21 20 3D 20 43 50 20 2D 20 52 4F 00DC
41 57 20 53 55 54 41 54 53 20 2C 4C 00E8
4C 55 4F 48 53 20 2C 4C 58 21 20 53 00F4
                  4C 58 21 20 45 42 20 44 0100
20 3D 20 54 4E 43 47 41 50 09 2F 21 0108           192          .ASCII  $!/      PAGCNT = !SL, REGION = P!UB SPACE, $
20 4E 4F 49 47 45 52 20 2C 4C 53 21 0114
45 43 41 50 53 20 42 55 21 50 20 3D 0120
                              20 2C 012C
4C 58 21 20 3D 20 52 44 41 54 45 52 012E           193          .ASCII  $RETADR = !XL - !XL!/$
                  2F 21 4C 58 21 20 2D 20 013A
                                  00000072 0142     194          EXPREGERRSIZ=.-EXPREGERRADR
                                        0142        195
                                        0142        196  RANGERRADR:
4E 41 52 20 4E 52 55 54 45 52 2F 21 0142           197          .ASCII  $!/RETURN RANGE ERROR - LOCATION = !XL$
4C 20 2D 20 52 4F 52 52 45 20 45 47 014E
58 21 20 3D 20 4E 4F 49 54 41 43 4F 015A
                              4C 0166
21 20 3D 20 52 44 41 4E 49 09 2F 21 0167           198          .ASCII  $!/       INADR = !XL - !XL, RETADR = !XL - !XL!/$
45 52 20 2C 4C 58 21 20 2D 20 4C 58 0173
2D 20 4C 58 21 20 3D 20 52 44 41 54 017F
                  2F 21 4C 58 21 20 018B
                                  0000004F 0191     199          RANGERRSIZ=.-RANGERRADR
                                        0191        200
                                        0191        201  IDMSGADR:
4E 41 4D 20 59 52 4F 4D 45 4D 2F 21 0191           202          .ASCII  $!/MEMORY MANAGEMENT SERVICES TEST #3 (CRTDEL), PASS !UL!/$
```

```
56 52 45 53 20 54 4E 45 4D 45 47 41  019D
33 23 20 54 53 45 54 20 53 45 43 49  01A9
50 20 2C 29 4C 45 44 54 52 43 28 20  01B5
      2F 21 4C 55 21 20 53 53 41  01C1
            00000039  01CA    203          IDMSGSIZ=.-IDMSGADR
                      01CA    204
                      01CA    205  RUN1_MSGADR:
20 20 2A 2A 2A 2A 2A 20 20 20 2F 21  01CA    206          .ASCII  $!/   *****   TEST WILL NOW BE RUN USING REGULAR VA SPACE      *****$
4E 20 4C 4C 49 57 20 54 53 45 54 20  01D6
53 55 20 4E 55 52 20 45 42 20 57 4F  01E2
20 52 41 4C 55 47 45 52 20 47 4E 49  01EE
2A 20 20 20 45 43 41 50 53 20 41 56  01FA
                  2A 2A 2A 2A  0206
                  20 2F 21  020A    207          .ASCII  $!/ $
            00000043  020D    208          RUN1_MSGSIZ=.-RUN1_MSGADR
                      020D    209
                      020D    210  PIDCTLADR:
            4C 55 21  020D    211          .ASCII  $!UL$
            00000003  0210    212          PIDCTLSIZ=.-PIDCTLADR
```

MMGCRTDEL
V04-000

K 4
- TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44 VAX/VMS Macro V04-00   Page   7
DATA STORAGE AND MESSAGE STRINGS   5-SEP-1984 01:58:02 [MMGTST.SRC]MMGCRTDEL.MAR;1   (5)

```
                                 0210      214  ;
                                 0210      215  ; STRING DESCRIPTORS
                                 0210      216  ;
                                 0210      217          .ALIGN  LONG
                                 0210      218
                                 0210      219  CRETVAERR:
         0000000A'00000063       0210      220          .LONG   CRETVAERRSIZ,CRETVAERRADR
                                 0218      221  DELTVAERR:
         0000006D'00000063       0218      222          .LONG   DELTVAERRSIZ,DELTVAERRADR
                                 0220      223  EXPREGERR:
         000000D0'00000072       0220      224          .LONG   EXPREGERRSIZ,EXPREGERRADR
                                 0228      225  RANGERR:
         00000142'0000004F       0228      226          .LONG   RANGERRSIZ,RANGERRADR
                                 0230      227  IDMSG:
         00000191'00000039       0230      228          .LONG   IDMSGSIZ,IDMSGADR
                                 0238      229  RUN1_MSG:
         000001CA'00000043       0238      230          .LONG   RUN1_MSGSIZ,RUN1_MSGADR
                                 0240      231  PIDCTL:
         0000020D'00000003       0240      232          .LONG   PIDCTLSIZ,PIDCTLADR
                                 0248      233
```

MMGCRTDEL
V04-000

L 4
- TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44 VAX/VMS Macro V04-00   Page   8
INITIALIZATION   5-SEP-1984 01:58:02 [MMGTST.SRC]MMGCRTDEL.MAR;1   (6)

```
                                0248    235              .SBTTL   INITIALIZATION
                                0248    236    ;*******************************************************************************
                                0248    237    ;PROGRAM DESCRIPTION:
                                0248    238    ;
                                0248    239    ;       THIS PROGRAM TESTS THE FOLLOWING SYSTEM SERVICES:
                                0248    240    ;               $CRETVA, $DELTVA
                                0248    241    ;
                                0248    242    ;       THE PROGRAM FORCES POSSIBLE ERROR PATHS FOR THE ABOVE MENTIONED
                                0248    243    ;       STSTEM SERVICES.   THREE PASSES ARE MADE THROUGH THE TEST LOOP
                                0248    244    ;       TO ENSURE PATH REPEATABILITY.   ONLY REGULAR VA SPACE IS USED IN
                                0248    245    ;       THIS TEST PROGRAM.
                                0248    246    ;
                                0248    247    ;       REFER TO MASD$:[MMGSTS.COM]MMGTST.RAP FOR FURTHER INFORMATION
                                0248    248    ;       REGARDING JUST HOW COMPLETELY THE ABOVE MENTIONED SYSTEM SERVICES
                                0248    249    ;       ARE TESTED BY THIS PROGRAM.
                                0248    250    ;
                                0248    251    ;       *PRIVILEGES:
                                0248    252    ;               THIS PROGRAM NEEDS NO SPECIAL PRIVILEGES TO EXECUTE.
                                0248    253    ;*******************************************************************************
                                0248    254    ;
                                0248    255    ; START HERE
                                0248    256    ;
                        0000    0248    257    START:  .WORD    0                             ;ENTRY MASK
                                024A    258            $OPEN    W^FAB                          ;OPEN THE FILE "$OUTPUT"
               0E 50    E9    0255    259            BLBC     R0,10$                         ;BRANCH IF ERROR
                                0258    260            $CONNECT W^RAB                         ;CONNECT THE RECORD ACCESS BLOCK
               09 50    E8    0263    261            BLBS     R0,20$
                                0266    262    10$:    $EXIT_S  R0                            ;EXIT WITH STATUS IN R0
    00000024'EF    01    D0    026F    263    20$:    MOVL     #1,PASSCNT                     ;INITIALIZE THE PASS COUNT
                                0276    264            $RESUME_S PID                          ;SET UP PROCESS ID
    50    0000001C'EF    3C    0285    265            MOVZWL   PID,R0
                                028C    266            $FAO_S   PIDCTL,MSGLEN,PIDMSGD,R0      ;INIT THE PROCESS ID STRING
                                02A4    267    ;
                                02A4    268    ; INFORM OPERATOR THAT TESTS WILL BE RUN USING ONLY NORMAL VA SPACE
                                02A4    269    ;
                                02A4    270            $FAO_S   RUN1_MSG,MSGLEN,MSGBUFD       ;INFORM OPR NORMAL VA USED FOR TESTS
               038A    30    02BA    271            BSBW     TYPEMSGBUF
    0010'CF    04    CA    02BD    272            BICL     #CTL$M_PIDMSG,W^CTLFLG        ;STOP PROCESS ID FROM PRINTING
                                02C2    273    RSTART:
                                02C2    274            RANGECHK ON
    0010'CF    08    C8    02C2            BISL     #CTL$M_RNGCHK,W^CTLFLG
                                02C7    275            $FAO_S   IDMSG,MSGLEN,MSGBUFD,PASSCNT
               0360    30    02E4    276            BSBW     TYPEMSGBUF
                                02E7    277            EXPREG   #1
          53    01    3C    02E7            MOVZWL   S^#SS$_NORMAL,R3
          54    01    D0    02EA            MOVL     #1,R4
    51    0008'CF    DE    02ED            MOVAL    W^RETRANGE,R1
                55    D4    02F2            CLRL     R5
               026D    30    02F4            BSBW     EXPREGSUBR
    52    0008'CF    7D    02F7    278            MOVQ     W^RETRANGE,R2
    0000'CF    52    7D    02FC    279            MOVQ     R2,W^INRANGE
    0014'CF    52    D0    0301    280            MOVL     R2,W^SAVEND
                                0306    281
```

MMGCRTDEL
V04-000

M 4
- TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page   9,
FORCE ERRORS IN CRETVA   5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (7)

```
                                    0306      283              .SBTTL  FORCE ERRORS IN CRETVA
                                    0306      284      ;
                                    0306      285      ; FORCE ERRORS FROM CRETVA
                                    0306      286      ;
                                    0306      287              CRETVA  #^X80000200,#^X80000A00,#SS$_NOPRIV ;SYSTEM ADDRESS
0000'CF   80000200 8F   D0 0306                      MOVL    #^X80000200,W^INRANGE
0004'CF   80000A00 8F   D0 030F                      MOVL    #^X80000A00,W^INRANGE+4
              53    24   3C 0318                      MOVZWL  #SS$_NOPRIV,R3
        50  0000'CF     DE 031B                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 0320                      MOVAL   W^RETRANGE,R1
              01C1       30 0325                      BSBW    CRETVASUBR
                                    0328      288              CRETVA  #^X7FFEC801,#^X7FFECD01,#SS$_PAGOWNVIO  ;KERNAL STACK
0000'CF   7FFEC801 8F   D0 0328                      MOVL    #^X7FFEC801,W^INRANGE
0004'CF   7FFECD01 8F   D0 0331                      MOVL    #^X7FFECD01,W^INRANGE+4
              53  01EC 8F 3C 033A                     MOVZWL  #SS$_PAGOWNVIO,R3
        50  0000'CF     DE 033F                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 0344                      MOVAL   W^RETRANGE,R1
              019D       30 0349                      BSBW    CRETVASUBR
                                    034C      289              CRETVA  W^SAVEND,#1@30-1,#SS$_VASFULL    ;FILL THE PAGE TABLE
0000'CF   0014'CF       D0 034C                      MOVL    W^SAVEND,W^INRANGE
0004'CF   3FFFFFFF 8F   D0 0353                      MOVL    #1@30-1,W^INRANGE+4
              53  0244 8F 3C 035C                     MOVZWL  #SS$_VASFULL,R3
        50  0000'CF     DE 0361                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 0366                      MOVAL   W^RETRANGE,R1
              017B       30 036B                      BSBW    CRETVASUBR
0018'CF   000C'CF       D0 036E      290              MOVL    W^RETRANGE+4,W^HIGHPOADR    ;SAVE HIGH ADDRESS
0000'CF   0008'CF       7D 0375      291              MOVQ    W^RETRANGE,W^INRANGE
                                    037C      292              CRETVA
              53    01   3C 037C                      MOVZWL  S^#SS$_NORMAL,R3
        50  0000'CF     DE 037F                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 0384                      MOVAL   W^RETRANGE,R1
              015D       30 0389                      BSBW    CRETVASUBR
                                    038C      293      ;
                                    038C      294      ; CONTINUE FORCING CRETVA ERRORS
                                    038C      295      ;
                                    038C      296              DELTVA                              ;DELETE WHAT WAS CREATED
              53    01   3C 038C                      MOVZWL  S^#SS$_NORMAL,R3
        50  0000'CF     DE 038F                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 0394                      MOVAL   W^RETRANGE,R1
              0161       30 0399                      BSBW    DELTVASUBR
        52  0014'CF     D0 039C      297              MOVL    W^SAVEND,R2
0000'CF       52        D0 03A1      298              MOVL    R2,W^INRANGE
0004'CF     0600 C2     DE 03A6      299              MOVAL   ^X600(R2),W^INRANGE+4
                                    03AD      300              CRETVA                              ;CREATE 4 PAGES
              53    01   3C 03AD                      MOVZWL  S^#SS$_NORMAL,R3
        50  0000'CF     DE 03B0                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 03B5                      MOVAL   W^RETRANGE,R1
              012C       30 03BA                      BSBW    CRETVASUBR
        62    62   90 03BD      301              MOVB    (R2),(R2)
0200 C2   0200 C2   90 03C0      302              MOVB    ^X200(R2),^X200(R2)    ;REFERENCE FIRST 2
                                    03C7      303              CRETVA                              ;CREATE OVER THEM (DELETE 1ST)
              53    01   3C 03C7                      MOVZWL  S^#SS$_NORMAL,R3
        50  0000'CF     DE 03CA                      MOVAL   W^INRANGE,R0
        51  0008'CF     DE 03CF                      MOVAL   W^RETRANGE,R1
              0112       30 03D4                      BSBW    CRETVASUBR
                                    03D7      304              DELTVA                              ;DELETE THEM ALL
              53    01   3C 03D7                      MOVZWL  S^#SS$_NORMAL,R3
```

```
     50  0000'CF  DE 03DA                       MOVAL   W^INRANGE,R0
     51  0008'CF  DE 03DF                       MOVAL   W^RETRANGE,R1
             0116 30 03E4                       BSBW    DELTVASUBR
                     03E7    305      CRETVA     $CRETVA STATUS=#SS$_ACCVIO,-
                     03E7    306                 INADR=W^4                      ;INACCESSIBLE INPUT RANGE
     53   0C  3C   03E7                          MOVZWL  #SS$_ACCVIO,R3
     50  0004'CF  DE 03EA                        MOVAL   W^4,R0
     51  0008'CF  DE 03EF                        MOVAL   W^RETRANGE,R1
             00F2 30 03F4                        BSBW    CRETVASUBR
                     03F7    307      CRETVA     $CRETVA STATUS=#SS$_ACCVIO,-
                     03F7    308                 RETADR=W^8                     ;INACCESSIBLE RETURN RANGE
     53   0C  3C   03F7                          MOVZWL  #SS$_ACCVIO,R3
     50  0000'CF  DE 03FA                        MOVAL   W^INRANGE,R0
     51  0008'CF  DE 03FF                        MOVAL   W^8,R1
             00E2 30 0404                        BSBW    CRETVASUBR
```

B 5

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page 11
V04-000   FORCE ERRORS FROM DELTVA   5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (8)

```
                                   0407   310        .SBTTL  FORCE ERRORS FROM DELTVA
                                   0407   311 ;
                                   0407   312 ; FORCE ERRORS FROM DELTVA
                                   0407   313 ;
                                   0407   314        RANGECHK OFF
              0010'CF   08   CA    0407           BICL    #CTL$M_RNGCHK,W^CTLFLG
                                   040C   315        DELTVA                                  ;DELETE LENVIO
                 53   01   3C      040C           MOVZWL  S^#SS$_NORMAL,R3
              50 0000'CF   DE      040F           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      0414           MOVAL   W^RETRANGE,R1
                    00E1   30      0419           BSBW    DELTVASUBR
                                   041C   316        RANGECHK ON
              0010'CF   08   C8    041C           BISL    #CTL$M_RNGCHK,W^CTLFLG
                                   0421   317        DELTVA  #^X80000200,#^X80000A00,#SS$_NOPRIV ;SYSTEM ADDRESS
        0000'CF 80000200 8F   DO   0421           MOVL    #^X80000200,W^INRANGE
        0004'CF 80000A00 8F   DO   042A           MOVL    #^X80000A00,W^INRANGE+4
                 53   24   3C      0433           MOVZWL  #SS$_NOPRIV,R3
              50 0000'CF   DE      0436           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      043B           MOVAL   W^RETRANGE,R1
                    00BA   30      0440           BSBW    DELTVASUBR
                                   0443   318        DELTVA  #0,#0                           ;ALREADY DELETED
        0000'CF     00   DO        0443           MOVL    #0,W^INRANGE
        0004'CF     00   DO        0448           MOVL    #0,W^INRANGE+4
                 53   01   3C      044D           MOVZWL  S^#SS$_NORMAL,R3
              50 0000'CF   DE      0450           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      0455           MOVAL   W^RETRANGE,R1
                    00A0   30      045A           BSBW    DELTVASUBR
                                   045D   319        DELTVA  #<1@31-<128@9>-1>,W^INRANGE,#SS$_PAGOWNVIO   ;ACCESS POINTER PAGE
        0000'CF 7FFEFFFF 8F   DO   045D           MOVL    #<1@31-<128@9>-1>,W^INRANGE
        0004'CF 0000'CF   DO        0466           MOVL    W^INRANGE,W^INRANGE+4
                 53 01EC 8F   3C   046D           MOVZWL  #SS$_PAGOWNVIO,R3
              50 0000'CF   DE      0472           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      0477           MOVAL   W^RETRANGE,R1
                    007E   30      047C           BSBW    DELTVASUBR
        0000'CF 0014'CF   DO        047F   320    MOVL    W^SAVEND,W^INRANGE
        0014'CF 00000600 8F   C1   0486   321    ADDL3   #^X600,W^SAVEND,W^INRANGE+4
                 0004'CF            048F
                                   0492   322        DELTVA  STATUS=#SS$_ACCVIO,-
                                   0492   323            INADR=W^4                          ;INPUT RANGE NOT ACCESSIBLE
                 53   0C   3C      0492           MOVZWL  #SS$_ACCVIO,R3
              50 0004'CF   DE      0495           MOVAL   W^4,R0
              51 0008'CF   DE      049A           MOVAL   W^RETRANGE,R1
                    005B   30      049F           BSBW    DELTVASUBR
                                   04A2   324        DELTVA  STATUS=#SS$_ACCVIO,-
                                   04A2   325            RETADR=W^8                         ;RETURN RANGE INACCESSIBLE
                 53   0C   3C      04A2           MOVZWL  #SS$_ACCVIO,R3
              50 0000'CF   DE      04A5           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      04AA           MOVAL   W^8,R1
                    004B   30      04AF           BSBW    DELTVASUBR
                                   04B2   326        CRETVA                                  ;GET SOME PAGES
                 53   01   3C      04B2           MOVZWL  S^#SS$_NORMAL,R3
              50 0000'CF   DE      04B5           MOVAL   W^INRANGE,R0
              51 0008'CF   DE      04BA           MOVAL   W^RETRANGE,R1
                    0027   30      04BF           BSBW    CRETVASUBR
                                   04C2   327        DELTVA  STATUS=#SS$_ACCVIO,-
                                   04C2   328            RETADR=@W^INRANGE                   ;DELETE PAGE CONTAINING RETURN RANGE
                 53   0C   3C      04C2           MOVZWL  #SS$_ACCVIO,R3
```

```
            50   0000'CF   DE   04C5                     MOVAL    W^INRANGE,R0
            51   0000'DF   DE   04CA                     MOVAL    @W^INRANGE,R1
                 002B      30   04CF                     BSBW     DELTVASUBR
                               04D2   329 ;
                               04D2   330 ;END OF LOOP
                               04D2   331 ;
  0C 0024'CF   0020'CF   F3   04D2   332                 AOBLEQ   W^MAXPASSCNT,W^PASSCNT,160$
            50   01        D0   04DA   333 150$:         MOVL     #1,R0
                               04DD   334                         $EXIT_S R0
                 FDD9      31   04E6   335 160$:         BRW      RSTART
                               04E9   336
```

D 5

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44 VAX/VMS Macro V04-00   Page 13
V04-000   SUBROUTINES TO CALL THE SERVICES   5-SEP-1984 01:58:02 [MMGTST.SRC]MMGCRTDEL.MAR;1   (9)

```
                     04E9        338                    .SBTTL   SUBROUTINES TO CALL THE SERVICES
                     04E9        339         ;
                     04E9        340         ; INPUT:
                     04E9        341         ;
                     04E9        342         ;            R0 = INADR
                     04E9        343         ;            R1 = RETADR
                     04E9        344         ;            R3 = DESIRED STATUS
                     04E9        345         ;
                     04E9        346         ; OUTPUT:
                     04E9        347         ;
                     04E9        348         ;            R2 PRESERVED
                     04E9        349         ;
                     04E9        350         CRETVASUBR:
                     04E9        351                    $CRETVA_S (R0),(R1)
        51  FD16 CF  DE  04F6     352                    MOVAL    W^CRETVAERR,R1          ;ERROR CONTROL STRING
                14   11  04FB     353                    BRB      CHECK1
                     04FD        354         ;
                     04FD        355         ; INPUT:
                     04FD        356         ;
                     04FD        357         ;            R0 = INADR
                     04FD        358         ;            R1 = RETADR
                     04FD        359         ;            R3 = DESIRED STATUS
                     04FD        360         ;
                     04FD        361         ; OUTPUT:
                     04FD        362         ;
                     04FD        363         ;            R2 PRESERVED
                     04FD        364         ;
                     04FD        365         DELTVASUBR:
                     04FD        366                    $DELTVA_S (R0),(R1)
        51  FD0A CF  DE  050A     367                    MOVAL    W^DELTVAERR,R1          ;ERROR CONTROL STRING
                00   11  050F     368                    BRB      CHECK1
                     0511        369         CHECK1:
        53    50  D1  0511        370                    CMPL     R0,R3                   ;STATUS AS DESIRED
              4B  13  0514        371                    BEQL     10$                     ;BRANCH IF YES
        53  0244 8F  B1  0516     372                    CMPW     #SS$_VASFULL,R3         ;IF EXPECTING VIRTUAL ADDRESS SPACE FULL
              05  12  051B        373                    BNEQ     5$
        50    1C  B1  051D        374                    CMPW     #SS$_EXQUOTA,R0         ;THEN EXCEEDS QUOTA MAY ALSO BE RETURNED
              3F  13  0520        375                    BEQL     10$
              54  DD  0522        376         5$:        PUSHL    R4
        54  04 AE  D0  0524        377                    MOVL     4(SP),R4               ;ADDRESS OF ERROR
                     0528        378                    $FAO_S   (R1),MSGLEN,MSGBUFD,R4,R0,R3,-
                     0528        379                             INRANGE,INRANGE+4,RETRANGE,RETRANGE+4
              10  BA  055B        380                    POPR     #^M<R4>
            00E7  30  055D        381                    BSBW     TYPEMSGBUF
              05  0560        382                    RSB
                     0561        383         10$:
            0069  31  0561        384                    BRW      RANGECHK               ;GO CHECK THE RETURN RANGE
                     0564        385         ;
                     0564        386         ; INPUT:
                     0564        387         ;
                     0564        388         ;            R1 = RETADR
                     0564        389         ;            R3 = DESIRED STATUS
                     0564        390         ;            R4 = PAGCNT
                     0564        391         ;            R5 = REGION
                     0564        392         ;
                     0564        393         ; OUTPUT:
                     0564        394         ;
```

```
                        0564    395 ;        R2 PRESERVED
                        0564    396 ;
                        0564    397 EXPREGSUBR:
                        0564    398         $EXPREG_S R4,(R1),,R5
        51  FCA9 CF  DE 0573    399         MOVAL    W^EXPREGERR,R1                    ;ERROR CONTROL STRING
                        0578    400 CHECK2:
            53   50  D1 0578    401         CMPL     R0,R3                            ;STATUS AS DESIRED?
                 39  13 057B    402         BEQL     10$                              ;BRANCH IF YES
                     56  DD 057D 403         PUSHL   R6
            56   04 AE D0 057F  404         MOVL     4(SP),R6                         ;ADDRESS OF ERROR
                        0583    405         $FAO_S   (R1),MSGLEN,MSGBUFD,R6,R0,R3,R4,R5,-
                        0583    406                  RETRANGE,RETRANGE+4
        0040 8F  BA 05AE 407             POPR     #^M<R6>
             0092 30  05B2   408             BSBW     TYPEMSGBUF
                  05  05B5   409             RSB
 0000'CF  0008'CF  D0 05B6   410 10$:        MOVL     W^RETRANGE,W^INRANGE             ;MAKE INPUT RANGE LOOK LIKE CRETVA/D
                 54  D7 05BD 411             DECL     R4
        54   54   09  78 05BF 412             ASHL    #9,R4,R4
 0004'CF  0000'CF  54 C1 05C3 413             ADDL3   R4,W^INRANGE,W^INRANGE+4
                  00  11 05CB 414             BRB     RANGECHK                         ;AND CHECK THE RETURN RANGE
                        05CD   415 RANGECHK:
     73 0010'CF  03 E1 05CD   416         BBC      #CTL$V_RNGCHK,W^CTLFLG,40$        ;BRANCH IF RANGE CHECK IS DISABLED
                 70 50 E9 05D3 417         BLBC    R0,40$                           ;IF ERROR IN SERVICE, SKIP THE RANGE
        50  0000'CF  7D 05D6 418             MOVQ    W^INRANGE,R0                     ;R0 = STARVA, R1 = ENDVA
            51   50  D1 05DB 419             CMPL    R0,R1                            ;WHICH DIRECTION?
                 12  1A 05DE 420             BGTRU   10$                              ;BRANCH IF BACKWARDS
                 04  1F 05E0 421             BLSSU   5$                               ;BRANCH IF FORWARDS
        0C 50   1E E0 05E2 422             BBS     #30,R0,10$                       ;FOR EQUAL, P0 SPACE FORWARDS, P1 BA
                        05E6   423 ;
                        05E6   424 ; REQUESTED RANGE IS FORWARDS
                        05E6   425 ;
        50  01FF 8F  AA 05E6 426 5$:         BICW    #^X1FF,R0                        ;FROM BYTE 0 OF STARVA
        51  01FF 8F  A8 05EB 427             BISW    #^X1FF,R1                        ;THROUGH LAST BYTE OF ENDVA
                 0A  11 05F0 428             BRB     20$                              ;
                        05F2   429 ;
                        05F2   430 ; GOING BACKWARDS IN VIRTUAL ADDRESS SPACE
                        05F2   431 ;
        50  01FF 8F  A8 05F2 432 10$:        BISW    #^X1FF,R0                        ;LAST BYTE OF STARVA
        51  01FF 8F  AA 05F7 433             BICW    #^X1FF,R1                        ;THROUGH FIRST BYTE OF ENDVA
     0008'CF  50  D1 05FC 434 20$:           CMPL    R0,W^RETRANGE                    ;IS THIS WHAT WAS RETURNED?
                 07 12 0601 435             BNEQ    30$                              ;BRANCH IF NOT, ERROR
     000C'CF  51  D1 0603 436             CMPL    R1,W^RETRANGE+4                  ;THIS ONE OK TOO?
                 3C 13 0608 437             BEQL    40$                              ;BRANCH IF YES, RANGE OK
                 53  DD 060A 438 30$:        PUSHL   R3                               ;SAVE REGISTER
        53   04 AE D0 060C 439             MOVL    4(SP),R3                         ;TO USE FOR ERROR PC
                        0610   440             $FAO_S  <W^RANGERR>,MSGLEN,MSGBUFD,R3,-  ;FORMAT THE ERROR MESSAGE
                        0610   441                     INRANGE,INRANGE+4,RETRANGE,RETRANGE+4
                 08  BA 0641 442             POPR    #^M<R3>                          ;RESTORE SAVE REGISTER
             0001 30  0643 443             BSBW    TYPEMSGBUF                        ;OUTPUT THE ERROR MESSAGE
                  05 0646 444 40$:           RSB                                      ;AND RETURN
```

F 5

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page 15
V04-000   MISCELLANEOUS SUBROUTINES   5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (10)

```
                              0647   446              .SBTTL  MISCELLANEOUS SUBROUTINES
                              0647   447    ;
                              0647   448    ; TYPE A MESSAGE
                              0647   449    ;        MSGBUF IS THE ADDRESS OF THE BEGINNING OF THE STRING
                              0647   450    ;        MSGLEN CONTAINS THE SIZE (IN BYTES) OF THE STRING
                              0647   451    ;
                              0647   452    TYPEMSGBUF:
        50   00BC'CF   DO     0647   453              MOVL    W^MSGLEN,R0                ;SIZE TO R0
        51   00DE'CF   DE     064C   454              MOVAL   W^MSGBUF,R1                ;ADDRESS TO R1
   08 0010'CF    02    E1     0651   455              BBC     #CTL$V_PIDMSG,W^CTLFLG,5$  ;BRANCH IF NO PROCESS ID REQUIRED
        51   00D0'CF   DE     0657   456              MOVAL   W^MSGBUFID,R1              ;ADDRESS INCLUDING PID MSG
        50   0E'  CO          065C   457              ADDL    S^#<MSGBUF-MSGBUFID>,R0    ;INCLUDE EXTRA BYTES IN COUNT
                              065F   458    5$:
     00A0'CF    51    DO      065F   459              MOVL    R1,W^RAB+RAB$L_RBF         ;SET BUFFER ADDRESS
     009A'CF    50    BO      0664   460              MOVW    R0,W^RAB+RAB$W_RSZ         ;AND SIZE
                              0669   461              $PUT    W^RAB                      ;OUTPUT THE MESSAGE
         01 50   E9           0674   462              BLBC    R0,20$
            05               0677   463              RSB
                              0678   464    20$:      $EXIT_S RO                         ;EXIT WITH ERROR STATUS
                              0681   465    ;
                              0681   466    ; INPUTS:
                              0681   467    ;
                              0681   468    ;        0(SP) = ADDRESS OF ERROR
                              0681   469    ;        R1 = ADDRESS OF FORMAT CONTROL STRING
                              0681   470    ;
                              0681   471    ; OUTPUTS:
                              0681   472    ;
                              0681   473    ;        R2 PRESERVED
                              0681   474    ;
                              0681   475    PROBERR:
            55    DD          0681   476              PUSHL   R5
      55  04 AE   DO          0683   477              MOVL    4(SP),R5
                              0687   478              $FAO_S  (R1),MSGLEN,MSGBUFD,R5
            20   BA           069E   479              POPR    #^M<R5>
         FFA4    30           06A0   480              BSBW    TYPEMSGBUF
            05               06A3   481              RSB
                              06A4   482
                              06A4   483
                              06A4   484              .END    START
```

G 5

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page 16
Symbol table   5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (10)

```
$$.TAB                 =  00000078 R    02      PASSCNT               00000024 R    02
$$.TABEND              =  000000BC R    02      PID                   0000001C R    02
$$.TMP                 =  00000000               PIDCTL                00000240 R    03
$$.TMP1                =  00000001               PIDCTLADR             0000020D R    03
$$.TMP2                =  000000CF               PIDCTLSIZ          =  00000003
$$T1                   =  00000000               PIDMSG                000000DA R    02
$$T2                   =  00000004               PIDMSGD               000000C8 R    02
BIT...                 =  00000004               PREVPROT              00000028 R    02
CHECK1                    00000511 R    03       PROBERR               00000681 R    03
CHECK2                    00000578 R    03       PRT$C_NONE         =  00000010
CRETVAERR                 00000210 R    03       RAB                   00000078 R    02
CRETVAERRADR              0000000A R    03       RAB$B_RAC         =  0000001E
CRETVAERRSIZ           =  00000063               RAB$C_BID         =  00000001
CRETVASUBR                000004E9 R    03       RAB$C_BLN         =  00000044
CRLF                      000000D0 R    02       RAB$C_SEQ         =  00000000
CTL$M_MEMLOOP          =  00000001               RAB$L_CTX         =  00000018
CTL$M_PIDMSG           =  00000004               RAB$L_RBF         =  00000028
CTL$M_RNGCHK           =  00000008               RAB$L_ROP         =  00000004
CTL$M_TSTLOOP          =  00000002               RAB$W_RSZ         =  00000022
CTL$V_MEMLOOP          =  00000000               RANGECHK              000005CD R    03
CTL$V_PIDMSG           =  00000002               RANGERR               00000228 R    03
CTL$V_RNGCHK           =  00000003               RANGERRADR            00000142 R    03
CTL$V_TSTLOOP          =  00000001               RANGERRSIZ        =  0000004F
CTLFLG                    00000010 R    02       RETRANGE              00000008 R    02
DELTVAERR                 00000218 R    03       RSTART                000002C2 R    03
DELTVAERRADR              0000006D R    03       RUN1_MSG              00000238 R    03
DELTVAERRSIZ          =  00000060               RUN1_MSGADR           000001CA R    03
DELTVASUBR                000004FD R    03       RUN1_MSGSIZ       =  00000043
EXPREGERR                 00000220 R    03       SAVEND                00000014 R    02
EXPREGERRADR              000000D0 R    03       SIZ...            =  00000001
EXPREGERRSIZ          =  00000072               SS$_ACCVIO        =  0000000C
EXPREGSUBR                00000564 R    03       SS$_EXQUOTA       =  0000001C
FAB                       00000028 R    02       SS$_NOPRIV        =  00000024
FAB$C_BID             =  00000003               SS$_NORMAL        =  00000001
FAB$C_BLN             =  00000050               SS$_PAGOWNVIO     =  000001EC
FAB$C_SEQ             =  00000000               SS$_VASFULL       =  00000244
FAB$C_VAR             =  00000002               START                 00000248 R    03
FAB$L_ALQ             =  00000010               SYS$CONNECT           ******** GX    03
FAB$L_FOP             =  00000004               SYS$CRETVA            ******** GX    03
FAB$V_CHAN_MODE       =  00000002               SYS$DELTVA            ******** GX    03
FAB$V_FILE_MODE       =  00000004               SYS$EXIT              ******** GX    03
FAB$V_LNM_MODE        =  00000000               SYS$EXPREG            ******** GX    03
FAB$V_PUT             =  00000000               SYS$FAO               ********  X    03
FAB$W_GBC             =  00000048               SYS$OPEN              ******** GX    03
HIGHPOADR                 00000018 R    02       SYS$PUT               ******** GX    03
IDMSG                     00000230 R    03       SYS$RESUME            ******** GX    03
IDMSGADR                  00000191 R    03       TYPEMSGBUF            00000647 R    03
IDMSGSIZ              =  00000039
INRANGE                   00000000 R    02
MAXPASSCNT                00000020 R    02
MSGBUF                    000000DE R    02
MSGBUFD                   000000C0 R    02
MSGBUFID                  000000D0 R    02
MSGBUFSIZ            =  000000A0
MSGLEN                    000000BC R    02
OUTNAMADR                 00000000 R    03
OUTNAMSIZ            =  0000000A
```

H 5

MMGCRTDEL   - TEST OF $CRETVA/$DELTVA SYSTEM SERVICE 16-SEP-1984 02:00:44   VAX/VMS Macro V04-00   Page 17
Psect synopsis   5-SEP-1984 01:58:02   [MMGTST.SRC]MMGCRTDEL.MAR;1   (10)

```
                              +-----------------+
                              ! Psect synopsis  !
                              +-----------------+


PSECT name                  Allocation        PSECT No.   Attributes
----------                  ----------        --------    ----------
.  ABS  .                 00000000 (      0.)  00 (   0.)  NOPIC  USR  CON  ABS  LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
$ABS$                     00000000 (      0.)  01 (   1.)  NOPIC  USR  CON  ABS  LCL NOSHR  EXE   RD    WRT NOVEC BYTE
DATA0                     0000017E (    382.)  02 (   2.)  NOPIC  USR  CON  REL  LCL NOSHR NOEXE  RD    WRT NOVEC PAGE
CODE                      000006A4 (   1700.)  03 (   3.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD  NOWRT NOVEC PAGE


                       +----------------------------+
                       ! Performance indicators !
                       +----------------------------+


Phase                   Page faults   CPU Time      Elapsed Time
-----                   -----------   --------      ------------
Initialization               10       00:00:00.09   00:00:02.13
Command processing           82       00:00:00.78   00:00:05.80
Pass 1                      306       00:00:10.95   00:00:39.66
Symbol table sort             0       00:00:01.15   00:00:03.94
Pass 2                      112       00:00:02.38   00:00:09.66
Symbol table output          12       00:00:00.09   00:00:00.19
Psect synopsis output         3       00:00:00.04   00:00:00.07
Cross-reference output        0       00:00:00.00   00:00:00.00
Assembler run totals        527       00:00:15.49   00:01:01.45
```

The working set limit was 1350 pages.
64539 bytes (127 pages) of virtual memory were used to buffer the intermediate code.
There were 50 pages of symbol table space allocated to hold 856 non-local and 14 local symbols.
484 source lines were read in Pass 1, producing 20 object records in Pass 2.
41 pages of virtual memory were used to define 34 macros.

```
                       +----------------------------+
                       ! Macro library statistics !
                       +----------------------------+


Macro library name                     Macros defined
------------------                     --------------
-$255$DUA28:[SYS.OBJ]LIB.MLB;1               0
-$255$DUA28:[SYSLIB]STARLET.MLB;2           25
TOTALS (all libraries)                      25
```

1120 GETS were required to define 25 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:MMGCRTDEL/OBJ=OBJ$:MMGCRTDEL MSRC$:MMGCRTDEL/UPDATE=(ENH$:MMGCRTDEL)+EXECML$/LIB

MMGEXPCNT
LIS

MMGNSFWSL
LIS

MOM
MAP

MMGCRTDEL
LIS

MMGCRDLSP
LIS

MMGCRTFIL
LIS

MMGLKWULW
LIS

MMGXQUOTA
LIS

MMGSETPRT
LIS

MOM